

## I/WE CLAIM

1. A cooking appliance comprising:

a cooktop including a cooking surface having a substantially smooth upper surface with at least one cooking zone being arranged thereon;

at least one gas burner assembly arranged below the upper surface of the cooktop, said gas burner assembly being adapted to selectively establish a first heat energy source for heating the at least one cooking zone to a cooking temperature;

a wire filament arranged adjacent to the at least one gas burner assembly; and

a control unit electrically interconnected to the wire filament, said control unit being adapted to activate the wire filament in a first mode, wherein electrical energy is momentarily supplied to the wire filament to ignite a flow of gas emanating from the gas burner assembly, and in a second mode, wherein the electrical energy is supplied to the wire filament coil in the absence of the flow of gas to establish a second heat energy source for heating the at least one cooking zone to a temperature below the cooking temperature.

2. The cooking appliance according to claim 1, wherein the wire filament is formed from a plurality of segments, each of said plurality of segments being independently interconnected with the control unit.

3. The cooking appliance according to claim 2, wherein the control unit can activate each of the plurality of segments independently or concurrently.

4. The cooking appliance according to claim 3, wherein the control unit activates only one of the plurality of segments to ignite the flow of gas.
5. The cooking appliance according to claim 4, wherein the filament includes four segments arranged about a perimeter of the gas burner assembly.
6. The cooking appliance according to claim 5, wherein each of the four segments operates on 40 watts of electrical energy.
7. The cooking appliance according to claim 1, further comprising: a re-radiant coil arranged proximate to the gas burner assembly, said re-radiant coil being adapted to be driven to radiant temperatures by the ignited flow of gas.
8. A cooking appliance comprising:
  - a cooktop including a cooking surface having a substantially smooth upper surface with at least one cooking zone being arranged thereon;
  - at least one gas burner assembly arranged below the upper surface of the cooktop, said gas burner assembly being adapted to selectively establish a first heat energy source for heating the at least one cooking zone to a cooking temperature;
  - a re-radiant coil positioned about the at least one gas burner assembly, said re-radiant coil being adapted to be driven to radiant temperatures by the first heat energy source; and

a wire filament arranged adjacent to the at least one gas burner assembly, said wire filament being adapted to both ignite a gas flow emanating from the at least one gas burner assembly and serve as a second heat energy source in the absence of the first heat energy source to heat the at least one cooking zone to a temperature below the cooking temperature.

9. The cooking appliance according to claim 8, further comprising: a control unit electrically interconnected to the wire filament, said control unit being adapted to selectively activate the wire filament during particular cooking operations.

10. The cooking appliance according to claim 9, wherein the wire filament is formed from a plurality of segments, each of said plurality of segments being independently interconnected with the control unit.

11. The cooktop according to claim 10, wherein the control unit can activate each of the plurality of segments independently or concurrently.

12. The cooktop according to claim 10, wherein one of the plurality of segments is adapted to selectively ignite the gas flow.

13. The cooktop according to claim 14, wherein the wire filament includes four segments arranged about a perimeter of the gas burner assembly.

14. The cooking appliance according to claim 13, wherein each of the four segments operates on 40 watts of electrical energy.

15. A method of operating a smooth-surface cooktop comprising:  
operating at a high temperature by:  
    opening a gas valve to send a flow of gas to a gas burner  
    assembly arranged below a cooking zone defined by the smooth-  
    surface cooktop;  
    igniting the flow of gas; and  
    heating the cooking zone to the high temperature through  
    heat emanating from the gas burner assembly; and  
operating at a low temperature by:  
    activating a wire filament arranged about the gas burner  
    assembly, while maintaining the gas flow deactivated, to heat the  
    cooking zone to the low temperature.
16. The method of claim 15, further comprising: momentarily  
activating at least a portion of the wire filament to ignite the gas flow  
causing the cooking zone to increase in temperature.
17. The method of claim 15, wherein operating at the high temperature  
further includes driving a re-radiant coil arranged about the gas burner  
assembly to radiant temperatures to visually indicate that the gas burner  
assembly is in operation.
18. The method of claim 15, wherein operating at the low temperature  
further includes activating a plurality of wire filament segments arranged  
about the gas burner assembly.
19. The method of claim 17, further comprising: selectively operating  
the plurality of wire filament segments independently or concurrently.